

Water Security Agency



Plan for 2014-15

Statement from the Minister



*The Honourable
Ken Cheveldayoff
Minister Responsible for
Saskatchewan Water Security
Agency*

I am pleased to present the Water Security Agency's Plan for 2014-15.

Water is one of our most important resources. Our province is enjoying unprecedented growth. Sustainable supplies of water are essential to support our continuing growth.

The Government's Direction and Budget for 2014-15 are built on the principle of *Steady Growth* to support a continued focus on sound economic growth and shared prosperity. To ensure our continued growth and to address the challenges of growth our government developed the Saskatchewan Plan for Growth. The Water Security Agency and the 25 Year Saskatchewan Water Security Plan support the Saskatchewan Plan for Growth by ensuring our water supports economic growth, quality of life and environmental well-being.

Infrastructure continues to be a priority for the Water Security Agency as we implement our 10-year Infrastructure Renewal Plan by rehabilitating our priority structures in the province, including electrical upgrades to Gardiner Dam and doubling the rate at which we are enlarging and rehabilitating the M1 Canal.

The Water Security Agency will also continue to promote and ensure safe drinking water for Saskatchewan residents through inspections, monitoring, reporting, education and compliance for all regulated works in the province.

The Water Security Agency will report on progress made toward this plan, within the financial parameters provided, in the 2014-15 Annual Report.

Response to Government Direction

The Government is committed to establishing Saskatchewan as the best place to live, work and raise a family.

In October 2013, the first progress report on the *Saskatchewan Plan for Growth – Vision 2020 and Beyond* was released. Saskatchewan's growth is strong and steady. As Saskatchewan continues to move forward, the Government will support growth in 2014-15 through investing in people and needed infrastructure, encouraging economic growth, and through sound policy and financial decisions.

Saskatchewan's Vision

"... to be the best place in Canada – to live, to work, to start a business, to get an education, to raise a family and to build a life."

Sustaining growth and
opportunities for Saskatchewan
citizens

Meeting the challenges
of growth

Securing a better quality
of life for all
Saskatchewan people

Delivering responsive
and responsible
government

Government's vision and four goals provide the framework for ministries, agencies and third parties to align their programs and services to these priorities and meet the needs of Saskatchewan's citizens.

All ministries and agencies will report on progress in their 2014-15 annual reports. This supports Government's commitment to keep its promises and ensures greater transparency and accountability to the people of Saskatchewan.

Mission, Strategies and Actions

Mission Statement

The Water Security Agency integrates all aspects of water management to ensure sustainable water supplies, safe drinking water, safe and effective infrastructure, and protection of water quality and aquatic habitats.

Strategy

Ensure the sustainability of our surface and ground water supplies

Key Actions

- 1. Evaluate applications for water use to determine sustainability and impact on other users and decide whether to allocate requested water supplies (ongoing).
- 2. Complete development of a hydrologic computer model for the South Saskatchewan River system that will be used to inform future water management decisions.
- 3. Subject to findings from 2013-14 work, develop and implement predictive water quality and fish habitat models for the Qu'Appelle River system to evaluate local and cumulative effects of new requests for water.
- 4. Review and update existing water rights licenses. Industrial purpose licenses and projects located along the Qu'Appelle River will be reviewed on a priority basis.
- 5. Develop sector specific materials such as fact sheets on conservation and efficiency best practices.
- 6. Identify options for increasing water use efficiencies through regulatory methods.
- 7. Work with partners to initiate research to better understand and manage the impacts of climate variability on water resources.

Strategy

Ensure Water Security Agency infrastructure safely meets water supply and management needs

Key Actions

- 1. Undertake the following dam safety activities to assess and manage the risks associated with the Water Security Agency's dams:
 - 1. Prepare and test emergency response plan for Rafferty Dam;
 - 2. Prepare emergency response plans for Alameda, Gardiner & Qu'Appelle River dams;
 - 3. Complete an independent Dam Safety Review of Alameda Dam;
 - 4. Complete an assessment of the Inflow Design Flood requirements at Rafferty and Alameda dams;
 - 5. Install an early warning dam breach identifications system at Rafferty, Alameda, and Qu'Appelle River dams;
 - 6. Prepare annual geotechnical and operation and maintenance reports for Gardiner, Qu'Appelle River, Rafferty and Alameda dams;
 - 7. Prepare technical maintenance manuals for Gardiner, Qu'Appelle River, Rafferty and Alameda dams;
 - 8. Complete a geotechnical assessment of Buffalo Pound Dam.
- 2. Continue to implement the 10-Year Rolling Plan for Infrastructure Rehabilitation by rehabilitating the following priority works:
 - 1. M1 Canal – Enlarge and line another approximately 2.6 km of canal and rehabilitate three major structures as a continuation of the planned rehabilitation program;
 - 2. Gardiner Dam – Complete electrical system upgrades for spillway gates;

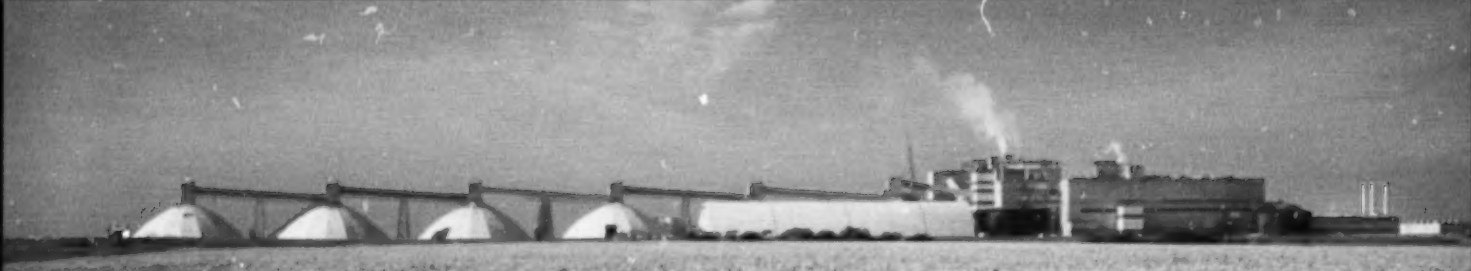


Photo Credit: Enterprise Saskatchewan, Greg Huszar Photography, Mosaic Belle Plaine site

- ✦ Boundary to Rafferty Diversion Channel - Repair a major erosion area on the diversion channel which resulted from 2011 flood flows;
- ✦ Gardiner Dam – Install an improved ventilation system and work to restore the original drainage capacity of the relief well drainage conduit;
- ✦ Alameda Dam – Complete geotechnical and structural assessments and develop feasibility level options for upgrades if necessary.
- ✦ Finalize a new reservoir operating plan for Lake Diefenbaker.
- ✦ Manage Water Security Agency lands to meet responsibilities for ecosystem health, source water protection and infrastructure management (ongoing).

Strategy

Ensure adequate water information is available to support decision making

Key Actions

- ✦ Review progress, assess results, and work toward completion of the multi-year Water Availability Study (WAS). The WAS is a \$7.5 million project to develop the information on water supply and water use needed to support sustainable water resource decisions that can address economic growth and adjust to changes in our water supply due to climate change. Activities for 2014-15 include:
 - ✦ Assessment of water use charges to support public infrastructure;
 - ✦ Benefit analysis of Lake Diefenbaker reservoir operating plan;
 - ✦ Analysis of water supply availability in the South Saskatchewan River system;
 - ✦ Continued work to determine the existing water use by sector and delineated by the major basin;
 - ✦ Continuation of the Value of Water Study and consideration of results in the development of water allocation policy;
 - ✦ Continued Environmental Instream Flow needs assessments for priority systems;
 - ✦ Partner with the Global Institute for Water Security on a major study of water quality at Lake Diefenbaker.
- ✦ Implement process that will enable preparation of an annual report on water use by sector.
- ✦ Prepare a State of the Aquifer System report for Regina East aquifers.
- ✦ Continue to collect and analyze water quality and biological quality data from the 24 provincial primary monitoring stations and provide Water Quality Index information to Environment Canada in accordance with the existing contribution agreement for enhanced surface water quality monitoring in Saskatchewan.
- ✦ Continue to collect and assess water quality data from critical sites to determine ecosystem health status and trends and inform decision making.
- ✦ Continue review of the Saskatchewan Primary Station Surface Water Quality Monitoring Program.
- ✦ Operate 300 hydrometric stations with Canada through the federal-provincial hydrometric network (ongoing).
- ✦ Work with the National Administrators Table on review of federal role in the hydrometric network.
- ✦ Operate the 70-station Provincial Groundwater Monitoring Network (the observation well network) (ongoing).
- ✦ Review goals of Hydrometric Monitoring Program and assess adequacy and gaps of current program.
- ✦ Complete evaluation of the application and ongoing use of the Saskatchewan Environment Environmental Management System database and SaskH₂O website for public delivery of drinking water and wastewater quality information.
- ✦ Identify opportunities to collaborate with external academic and research partners on defining and undertaking strategic research initiatives.



Photo Cred it: Tourism Saskatoon, Broadway Bridge

Strategy

Develop or acquire new infrastructure to meet water supply and management needs

Key Actions

- Continue to investigate, design and implement maintenance measures to restore, in the short term, some of the original flow capacity of the Upper Qu'Appelle channel.
- Complete the feasibility study investigating alternative measures to increase the delivery of water from Lake Diefenbaker to Buffalo Pound Lake to meet long term water supply needs.
- Continue discussions with Canada to transfer federally-owned infrastructure to the Water Security Agency where appropriate to meet provincial interests.

Strategy

Ensure our drinking water is safe

Key Actions

- Ensure the provision of safe drinking water through inspections, monitoring, reporting, education and compliance follow-up for Water Security Agency regulated waterworks.
- Review, revise and post any updated fact sheets and educational materials on the Water Security Agency website, and promote educational efforts through the Saskatchewan Urban Municipalities Association (SUMA), the Saskatchewan Association of Rural Municipalities (SARM) and the Saskatchewan Association of Rural Water Pipelines meetings and publications.
- Promote safe drinking water production during flood events through publications, meetings and promotional efforts with SUMA, SARM, the Saskatchewan Public Works Association, the Saskatchewan Water and Wastewater Association and other stakeholders and interest groups.
- Encourage consideration of conversion to regional systems during inspection, waterworks upgrade evaluation and pre-design plan review.
- Support and work with SaskWater to evaluate and assess (with federal and First Nations governments) opportunities for the province to provide infrastructure, including connections to regional water systems, and technical and inspection services on reserves on a cost-recovery basis.
- Complete study to consider the application of Point of Entry water treatment devices for use on treated and raw water pipelines in rural Saskatchewan.
- Review and update the province's approach to Safe Drinking Water including consideration of the 2002 Laing Report and the 2002 Safe Drinking Water Strategy.
- Continue to develop drinking water guidelines for water treatment plants regulated by the Water Security Agency.
- Continue to develop codes of practice, guidelines, best management practices and design standards for wastewater and biosolids treatment facilities regulated by the Water Security Agency.
- Continue to collect source and treated drinking water samples from selected affected communities in the province to identify parameter exceedence, assess the performance and/or evaluate the water quality testing results and treatment system provided by the communities, conduct research if needed to assess the risk.



Photo Credit: Ministry of Parks, Culture and Sport, Greg Huszar Photography, Dock Jumpers

Strategy

Ensure wastewater is effectively managed

Key Actions

- † Protect source water by ensuring effective treatment and management of wastewater, through inspections, monitoring, reporting, education and compliance follow-up for wastewater works regulated by the Water Security Agency.
- † Determine priority wastewater facilities requiring upgrades, ensure completion of needed effluent characterization and aid sewage works owners in developing site specific discharge criteria to advance implementation of the Canadian Council of Ministers of the Environment Municipal Waste Water Effluent Strategy.
- † Consider and if needed negotiate and implement an Administration Agreement or Equivalency Agreement with Environment Canada for implementation of the federal Wastewater System Effluent Regulations by the Water Security Agency in Saskatchewan.
- † Evaluate guidelines and develop coordinated policies for on-site wastewater management and disposal, including an interjurisdictional review of on-site wastewater management practices.

Strategy

Reduce risk of flood, drainage, and drought damages in the province

Key Actions

- † Provide real time hydrometric information for emergency preparedness, flood mitigation, and flood response (ongoing).
- † Assess potential spring runoff and flood risk, forecast flood risk and notify potentially impacted communities of flood risk (ongoing).
- † When requested, provide technical advice on flood protection measures to the public.
- † Work with the Ministry of Government Relations on the development of a long term flood mitigation program.
- † Define the scope and standard of flood forecasting services provided by the Water Security Agency and establish formal liaison protocols with Alberta and Manitoba for transfer of information and data.
- † Investigate improved flood forecasting tools.
- † Complete construction cleanup relating to the constructed channel below Fishing Lake. Assess options and begin to convert emergency flood control berms around Fishing Lake to permanent works.
- † Investigate drainage complaints, make recommendations or orders as appropriate, and undertake required enforcement (ongoing).
- † Support maintenance of organized drainage and channel clearing through the Water Control Program to help Conservation and Development Area Authorities, Watershed Associations, Rural Municipalities and landowners deal with excess moisture (ongoing).
- † Continue to work with other agencies (federal and provincial) to better understand and manage the impacts of climate variability on water resources.
- † Use results from the On-Line Drainage Forum, as well as other consultations, in development of a new, results-based drainage works approval process.

Strategy

Ensure water quality, aquatic habitat and aquatic ecosystem function are sustained

Key Actions

- ▮ Protect aquatic habitat by ensuring the potential impacts of work in or near water regulated by Water Security Agency are minimized through permitting, inspections, monitoring, education and compliance follow-up.
- ▮ Conduct second year of a planned three-year research program on water quality in the Qu'Appelle system to help understand nutrient sources and transport and develop water quality objectives.
- ▮ Continue community-based watershed planning by completing the development of the Old Wives Lake Source Water Protection Plan and supporting the implementation of that plan through a local stakeholder-based stewardship group.
- ▮ Work with the Saskatchewan Association of Watersheds to develop and implement a strategy to define the roles and fulfill the responsibilities of watershed and aquifer stewardship groups, including development of a plan for the renewal of source water protection plans.
- ▮ Continue to evaluate and enhance the approach to implementing source water protection plans to ensure that threats to source water are mitigated into the future.
- ▮ Continue to encourage and assist community-based watershed stewardship groups to facilitate implementation of beneficial land and water management practices to reduce non-point sources of nutrients and other contaminants to surface and ground water.
- ▮ Continue to partner with the Prairie Habitat Joint Venture to promote the conservation of wetland and associated upland habitat.
- ▮ Continue work on a new provincial wetland policy.
- ▮ Evaluate current minimum environmental flow objective for the Qu'Appelle River system.
- ▮ Continue to annually assess impacts of water management on the Piping Plover population at Lake Diefenbaker and implement the conservation plan.

Strategy

Engage and inform stakeholders and the public regarding water issues

Key Actions

- ▮ Work with the Provincial Water Council to ensure an understanding of stakeholder perspectives on key issues and initiatives.
- ▮ Review and revise protocols for informing the public during water-related emergencies.

Strategy

Work cooperatively with other governments and government agencies to ensure effective water management in Saskatchewan

Key Actions

- ▮ Support the work of the Council of the Federation Water Stewardship Council working group to develop and implement strategies for national sharing of water information and data.
- ▮ Ensure all obligations under transboundary water sharing agreements, including the Prairie Provinces Water Board (PPWB), are met.



Photo Credit: Courtesy of Enterprise Saskatchewan, Sub-surface Geological Lab

- ✦ Work with the PPWB Committee on Groundwater to finalize a groundwater sharing agreement. Specifically, continue to work with the PPWB through to Board Approval of Schedule F.
- ✦ Review fish tissue data and monitoring program for PPWB sites. Develop PPWB management response protocol for water quality and fish tissue objective excursions.
- ✦ Continue to work with the International Souris River Board of the International Joint Commission and the Task Force to establish an enhanced operating plan for Rafferty and Alameda reservoirs.
- ✦ In compliance with the International Souris River Basin Agreement, continue to collect and assess water quality data from critical sites to determine ecosystem health status and trends and inform decision making.
- ✦ Co-chair the Canadian Council of Ministers of the Environment Water Management Committee, establish priority work activities that support Saskatchewan's water issues, and review and manage approval processes for publishing reports developed by the committee.
- ✦ Complete negotiation of the Saskatchewan-Alberta Bilateral Water Management Agreement to fulfill the obligations of the Mackenzie River Basin Transboundary Waters Master Agreement. Initiate discussions with the Northwest Territories on development of a bilateral water management agreement and represent Saskatchewan on the Mackenzie River Basin Board.
- ✦ To ensure the terms of the 1921 Order for the St. Mary and Milk rivers are met, provide technical assistance to assist in the development of apportionment release plans, meet apportionment requirements and liaise with the governments of Montana, Alberta, and Canada, as well as with local irrigation districts.

Strategy

Work toward reconciliation in water management while meeting legal responsibilities for consultation and accommodation regarding First Nations and Métis communities

Key Actions

- ✦ Work toward improved models for engagement with First Nations and Métis communities by providing appropriate staff with the knowledge and experience required to facilitate effective working relationships.
- ✦ Implement First Nations flood claim agreements in the Qu'Appelle Valley.
- ✦ Implement the water management agreements with Qu'Appelle Valley First Nations.
- ✦ Continue consultations with Fishing Lake First Nation on the Fishing Lake Emergency Channel Project.
- ✦ Engage First Nations, Métis and stakeholders in the Mackenzie River Basin in discussions on finalization of the Mackenzie River Basin Bilateral Agreement with Alberta and initiate discussions around the development of an agreement with NWT.
- ✦ Continue to consult with First Nations and rights-bearing Métis communities where the Water Security Agency is planning work that may impact aboriginal or treaty rights.
- ✦ Work with community-based watershed stewardship groups to engage and involve First Nations communities in activities around watershed management.



Photo Credit: Ministry of Parks, Culture and Sport, Greg Huszar Photography, Elbow Marina

Strategy

Improve the effectiveness and efficiency of the Water Security Agency's legislation, policies and services

Key Actions

- ⌘ Continue development of modern and comprehensive water legislation.
- ⌘ Develop a results-based regulation on Aquatic Habitat Protection permitting related activities.
- ⌘ Conduct Lean reviews of programs and services to identify and implement gains in efficiency, following an established schedule.
- ⌘ Complete third year of a four-year schedule to review all Water Security Agency programs for efficiency and effectiveness.

Strategy

Attract and retain professional staff by supporting employee development, stimulating employee engagement and enabling employees to succeed

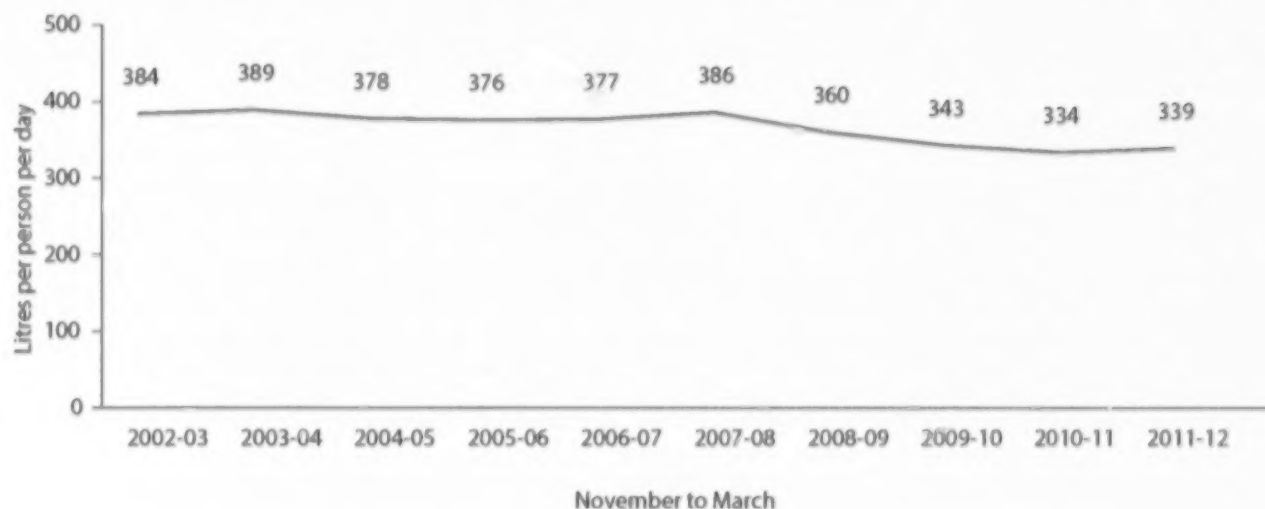
Key Actions

- ⌘ Continue implementation and monitoring of the five-year Human Resources Management Strategy to ensure alignment with the goals of the Water Security Agency, and the strategic direction for the public service and the delivery of human resource functions with a focus on client service.
- ⌘ Implement phase 1 of the Performance Management Project for management employees, including providing training and support, and monitoring participation.
- ⌘ Implement the on-boarding program for new employees, and ensure the Agency's recruitment activities are undertaken in accordance with best practices.
- ⌘ Continue support of staff training and career development, and use employee training and development to support succession management.
- ⌘ Undertake hazard and risk assessments for key corporate branches, and ensure the implementation of an Occupational Health and Safety (OHS) employee orientation process is consistent and integrated with the corporate on-boarding program, and that the implications of *The Saskatchewan Employment Act and Regulations* are integrated, as required, into the corporate OHS Program.
- ⌘ Implement a Culture Sustainment Plan to enhance internal communications, employee recognition, and instill our commitment to excellence.

Performance Measures

Measure

Winter municipal per capita water consumption



Source: Water Security Agency 2014

Note: Data is collected on a calendar year basis. The 2013 information required for the Nov 2012-March 2013 timeframe is not yet available.

Measure Description

This measure indicates water conservation as it relates to municipal and First Nations community water use, including use in the home, in businesses, and for public services such as firefighting, road building, public pools and rinks. It also includes water lost due to system leakage. Only the winter consumption measure is presented, as it more clearly shows trends in municipal water use. Data is derived from community water use records, submitted annually to the Water Security Agency, compared to population records from current Ministry of Health data, or to current census data where health data is not available.

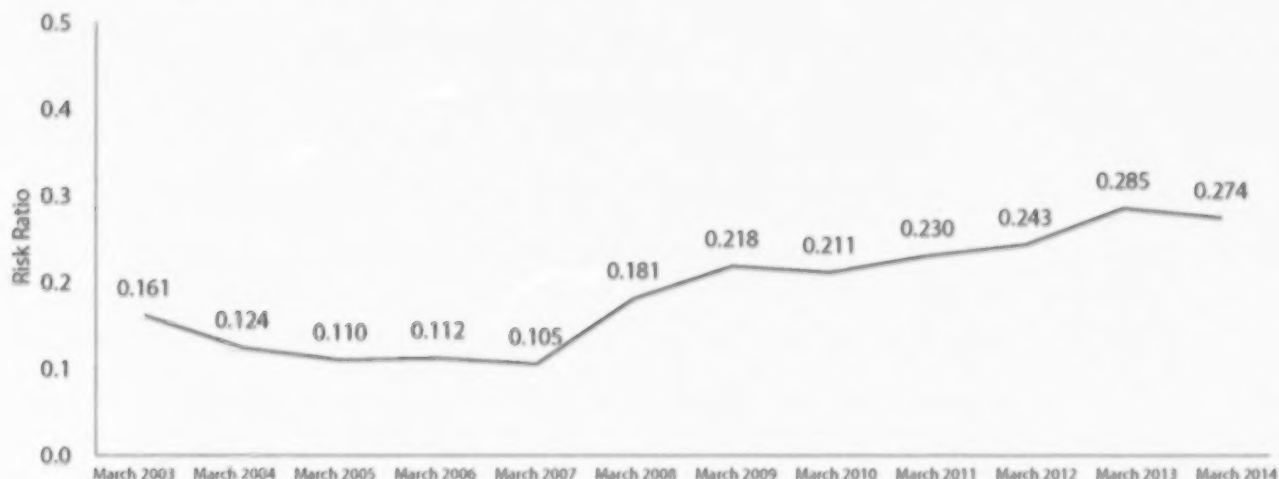
Residential water conservation is a critical component of overall municipal water conservation. In 2006, residential water use in Saskatchewan accounted for an estimated 44 per cent of the total annual municipal use. Toilets alone account for an estimated 30 per cent of in-home residential use. The Water Security Agency promoted conversion to low flow toilets through the Provincial Toilet Replacement Rebate Program and continues to raise awareness of additional water conservation opportunities.

The data indicate a downward trend in per capita municipal water use in recent years. As the Water Security Agency's water conservation initiatives have focused on promoting residential conservation practices, they should directly influence this measure. Please note, however, that prior to the 2014-15 plan, the usage data for the City of Saskatoon included water processed by the city but used outside of the city. Because Saskatoon accounts for about 20 per cent of the provincial population, this usage data was skewing the overall estimate significantly. This has now been corrected and all years of data have been revised.

This measure supports the following strategy: **Ensure the sustainability of our surface and ground water supplies.**

Measure

Risk associated with Water Security Agency dams



Source: Water Security Agency 2014

Measure Description

This graph shows the Water Security Agency's progress in upgrading its dams to acceptable standards, and the overall risk associated with these works. As an intermediate outcome measure, the Water Security Agency uses a ratio of the assessed current risk to the total possible risk to establish targets and measure progress in reducing risk associated with its dams. Risk, defined as the probability of a failure multiplied by the consequences of a failure, has been assessed in relative values. The Assessed Current Risk is determined by multiplying the Failure Rating and the Consequence Rating for each structure.

The information used to determine Failure Probability values comes from a variety of sources including: annual inspections; internal and external dam safety reviews; design and assessment studies; issue identification by site staff/ project operators; and review of dam performance monitoring data. Consequence ratings are assessed for each structure and based upon an estimation of life safety, economic damages and restoration costs in the case of a failure. A lower ratio indicates safer infrastructure, with a ratio of zero indicating no current assessed risk.

Numerically the risk ratio can be expressed as: **Risk Ratio = Σ Assessed Current Risk / Σ Total Possible Risk**

The risk ratio decreased slightly in 2013-14, principally due to the completion of rehabilitation work at Moose Mountain Dam and an assessment of the Qu'Appelle River Dam outlet works which indicates a lower risk associated with that dam. Approximately 50 per cent of the assessed current risk relates to dam safety issues at Rafferty and Alameda dams.

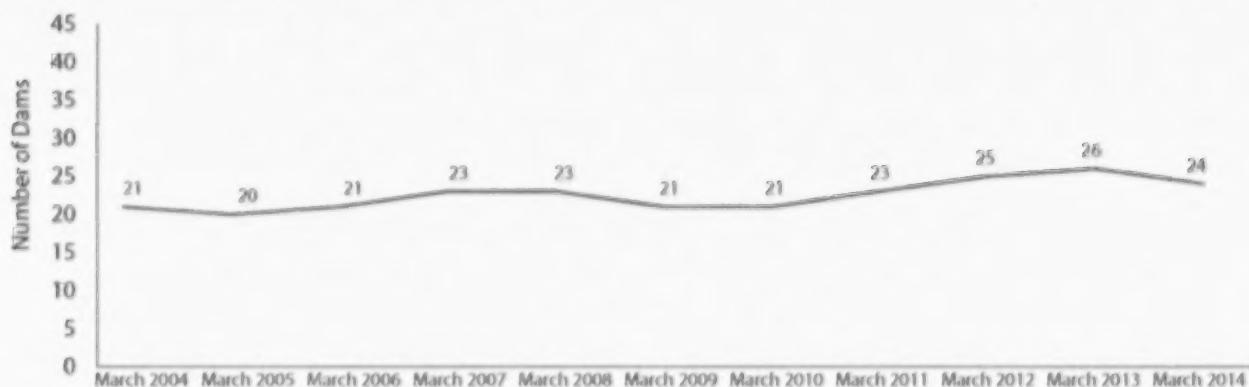
This measure supports the following strategy: **Ensure Water Security Agency infrastructure safely meets water supply and management needs.**



Photo Credit: Saskatchewan Watershed Authority, SWA employees, water quality monitoring, Moose Jaw River

Measure

Number of Water Security Agency dams requiring upgrades



Source: Water Security Agency 2014

Measure Description

This measure quantifies the number of Water Security Agency dams which require upgrades to meet the provisions of the Dam Safety Guidelines (2007) published by the Canadian Dam Association. The Water Security Agency is responsible for the operation and maintenance of 45 dams and, like all provincial governments and major utilities across Canada, manages its works generally in accordance with these guidelines.

Depending upon the dam, a failure could have significant economic and safety consequences. However, unlike the risk ratio, this measure does not indicate the severity of the identified deficiencies. This measure is useful in gauging progress made over time to reduce the number of deficient dams.

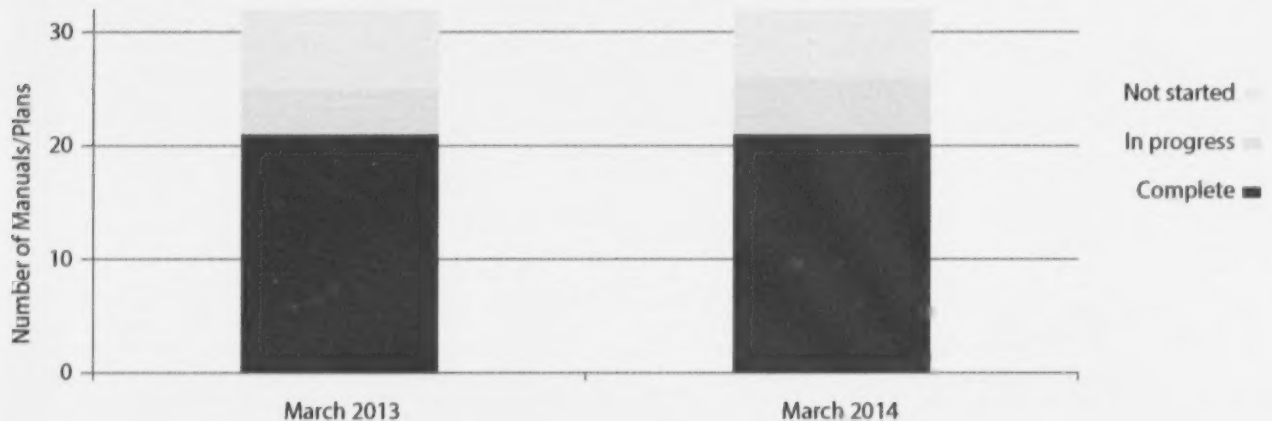
The Failure Probability of a Water Security Agency dam is assessed in terms of (a) hydrology/hydraulic, (b) geotechnical, and (c) structural/electrical/mechanical condition rating factors. These three rating factors vary from 0 (adequate) to 9 (grossly inadequate) for a maximum possible Failure Probability of 27. The assessment of deficiency has changed this year - dams assessed to have at least one condition rating factor of three or greater are deemed to be deficient dams. This differs from past practice where dams were deemed deficient if the Failure Probability (i.e., sum of the three condition rating factors) was assessed to be three or greater. The values for all years shown in the chart above are based upon the new rating methodology. The information used to determine Failure Probability values comes from a variety of sources including: annual inspections; internal and external dam safety reviews; design and assessment studies; issue identification by site staff/project operators; and review of dam performance monitoring data.

In 2013-14, the number of dams requiring upgrades was reduced from 26 to 24 structures as a result of the rehabilitation of Moose Mountain Dam and repair of the concrete outlet structure at Candle Lake. As with the previous measure, this measure is of interest to the government as the upgrading and safety of dams is fundamental to public safety and to dependable water supplies to support the economy.

This measure supports the following strategy: **Ensure Water Security Agency infrastructure safely meets water supply and management needs.**

Measure

Status of required operation plans and project manuals for the Water Security Agency's four major dams



Source: Water Security Agency 2014

Measure Description

This new measure tracks the status of operation plans and project manuals required for the Water Security Agency's four major dams. As part of the original design and construction of the four major dams (Gardiner, Qu'Appelle River, Rafferty, and Alameda), operation and maintenance manuals were provided by the Engineer-of-Record to support the safe operation of the dams. However, given the aging infrastructure, changes in water management strategies and dam safety management principles and practices, thorough updates were considered necessary and several additional manuals were required. There are a total of 32 manuals and plans required for the four major dams, including:

- ⇨ Reservoir Operation Plans to describe how dams should be operated under different scenarios ranging from drought to flood conditions;
- ⇨ Operation & Maintenance Manuals to detail how to operate project facilities as well as what, how and when operation tests/evaluations and routine and preventative maintenance shall be undertaken;
- ⇨ Technical Maintenance Manuals to outline what systems exist to monitor/assess works performance and how and when performance monitoring is to be undertaken;
- ⇨ Operation, Maintenance, and Surveillance Manuals to provide a concise summary of the detailed manuals and plans noted above;

In 2013-14, work continued on the reservoir operating plans for Lake Diefenbaker, Rafferty Reservoir and Alameda Reservoir and work on the technical maintenance manual for Gardiner Dam was started.

This measure supports the following strategy: **Ensure Water Security Agency infrastructure safely meets water supply and management needs.**

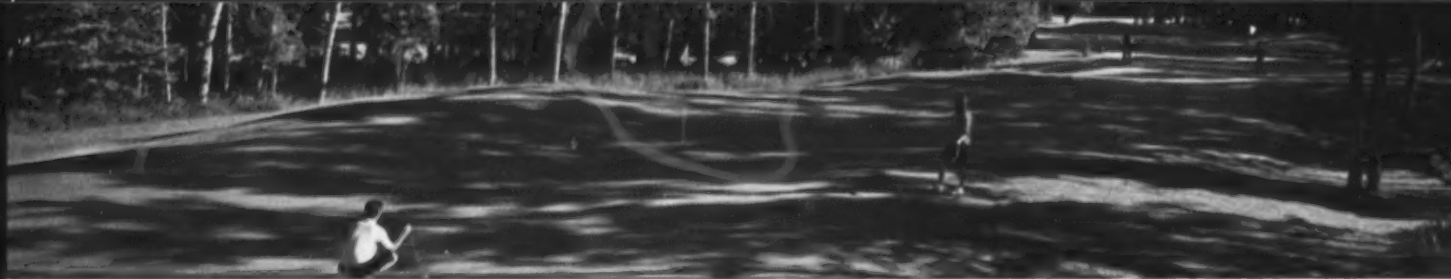
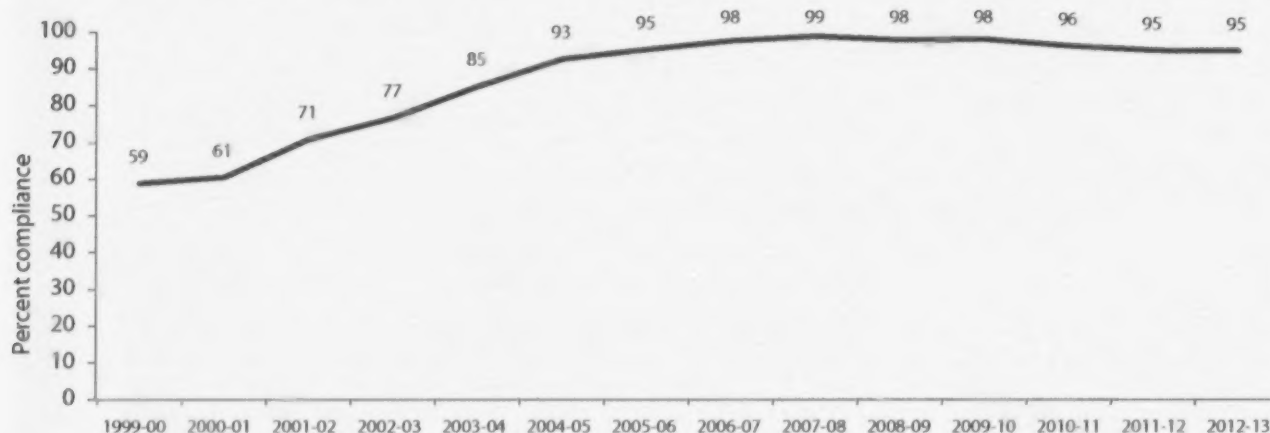


Photo Credit: Ministry of Parks, Culture and Sport, Greg Huszar Photography, Evergreen Golf Course

Measure

Drinking water quality standards compliance



Source: Water Security Agency; SEEMS Database 2013

Measure Description

The drinking water quality compliance indicator is an average of compliance with disinfection and bacteriological standards, both of which measure compliance with drinking water quality standards. This indicator looks at both the results of bacteriological water quality monitoring and the level of disinfectant present in drinking water and is a good predictor of the safety of drinking water. Compliance with drinking water quality standards for disinfection and bacteriological quality is important as microbial contamination in water supplies can quickly result in significant illness. Proper disinfection is an important way to ensure safe drinking water and prevent the outbreak of waterborne diseases. The indicator reports on the actions of the Water Security Agency in addressing risks to the health of people and the environment and key actions related to ensuring safe and sustainable drinking water. The accuracy of this indicator is fully dependent on accurate testing and reporting by regulated waterworks operators.

The drinking water quality compliance indicator has remained very good for the past few years and is relatively stable. The Water Security Agency will continue to reinforce the need to comply with disinfection requirements and proper reporting of disinfection values in 2014-15 and beyond to ensure increased awareness. Ongoing inspection and education awareness initiatives with waterworks owners and operators are planned to sustain good performance in achieving water that is safe from bacteriological threats and meets disinfection standards.

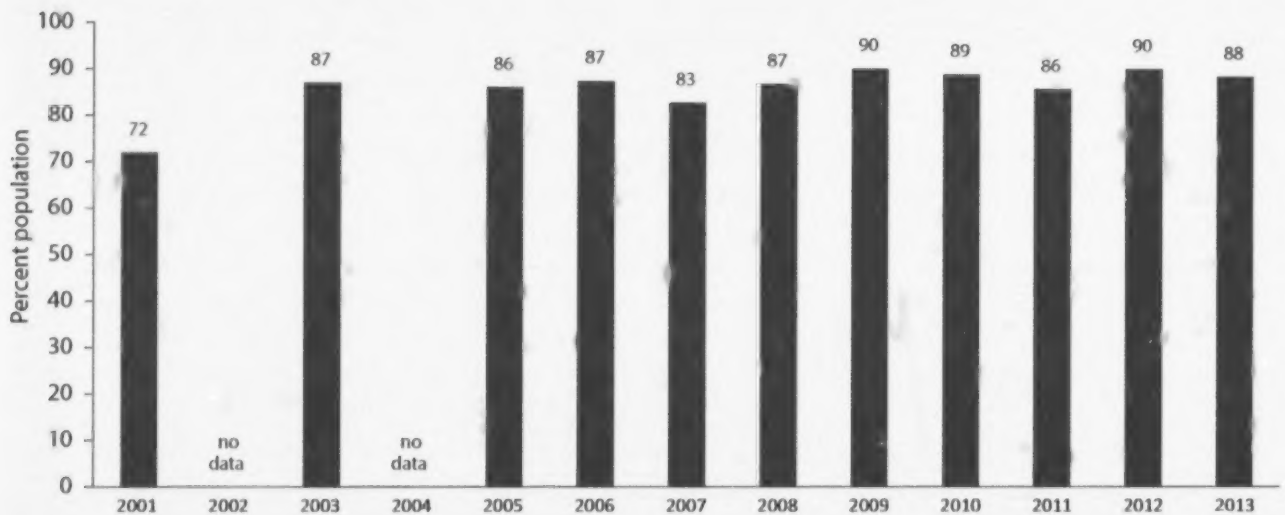
This measure supports the following strategy: **Ensure our drinking water is safe.**



Photo Credit: Ministry of Parks, Culture and Sport, Devona Hill Photography, Rolling Pines Golf and Country Resort

Measure

Drinking water quality satisfaction



Source: Ministry of Environment Polling Results 2013

Measure Description

The Drinking Water Quality Satisfaction Indicator is based on the results of annual polling of Saskatchewan residents on their level of confidence in the quality of their drinking water supply. The measure is the percentage of respondents who indicated that they are very or somewhat confident in the quality of their tap water. This indicator reflects upon the success of the Water Security Agency in advancing safe drinking water supplies across the province including the municipalities, pipelines and large commercial water systems.

The Drinking Water Quality Satisfaction Indicator has remained above 80 per cent since 2003. The change from 2012 to 2013 may be related to significant water contamination incidents that occurred in early 2012 at Prince Albert and Weyburn. Ongoing attention to actions such as consumer education efforts, waterworks inspections, media coverage of water contamination events affecting larger centers, implementation of water quality standards, water workshops and consumer notification will help to maintain a high level of public confidence in the safety of drinking water in the future.

Key risks to achieving this measure include: lack of public knowledge about the effectiveness of drinking water quality compliance requirements and efforts; major climatic events that impact base survey water quality and quantity (such as sustained droughts or major flooding); and upsets or significant problems at a waterworks for a major centre in or beyond the province that may influence the confidence of a significant portion of population in Saskatchewan. There is also some risk in how the survey is constructed (for instance, the order in which questions are asked and the possibility that other topics covered in the survey might influence the respondents' answers).

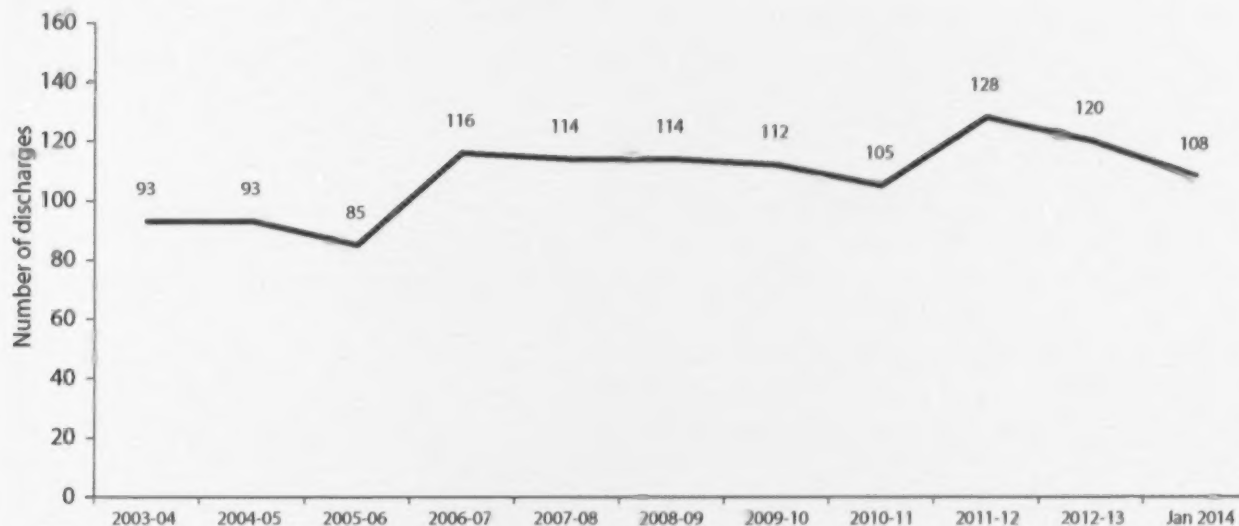
This measure supports the following strategy: **Ensure our drinking water is safe.**



Photo Credit: Ministry of Parks, Culture and Sport, Davin Andrie, Hunt Falls

Measure

Sewage effluent discharges that represent a risk to source waters



Source: Water Security Agency 2014

Measure Description

The number of sewage effluent discharges that represent a risk to source waters is a direct indication of the potential for source water contamination due to poor wastewater treatment. This measure now incorporates the need for future compliance with the Canada-Wide Strategy for Municipal Waste Water Effluents standards. This measure is selected since it is the most direct measure of the number of potential significant contamination point sources affecting a range of water uses.

As of January 31, 2014, approximately 108 wastewater systems have been identified as having a discharge that may reach a surface water body or represent a risk to source waters under certain conditions. Of these 108 systems, up to 88 may require compliance with pending Canada-wide Standards for Municipal Waste Water Effluent and 71 may require compliance with the Wastewater System Effluent Regulations (WSER) developed pursuant to the federal Fisheries Act. The number of wastewater systems which must be managed to the WSER standard will be finalized once an administrative agreement is developed between the Water Security Agency and Environment Canada.

Growth in Saskatchewan communities is placing additional pressure on sewage infrastructure as some communities are at treatment and/or storage capacity. On an annual basis, Water Security Agency staff review the quality of effluent from each regulated sewage works. Reduction of ammonia within treated wastewater effluent, sewage works capacity or other treatment capability issues typically involve significant planning, investment and construction. The number of discharges that represent a risk has fallen since March 2012 as a number of systems have been upgraded. However, it can be expected that ongoing reductions will be a time consuming process and will continue for the foreseeable future.

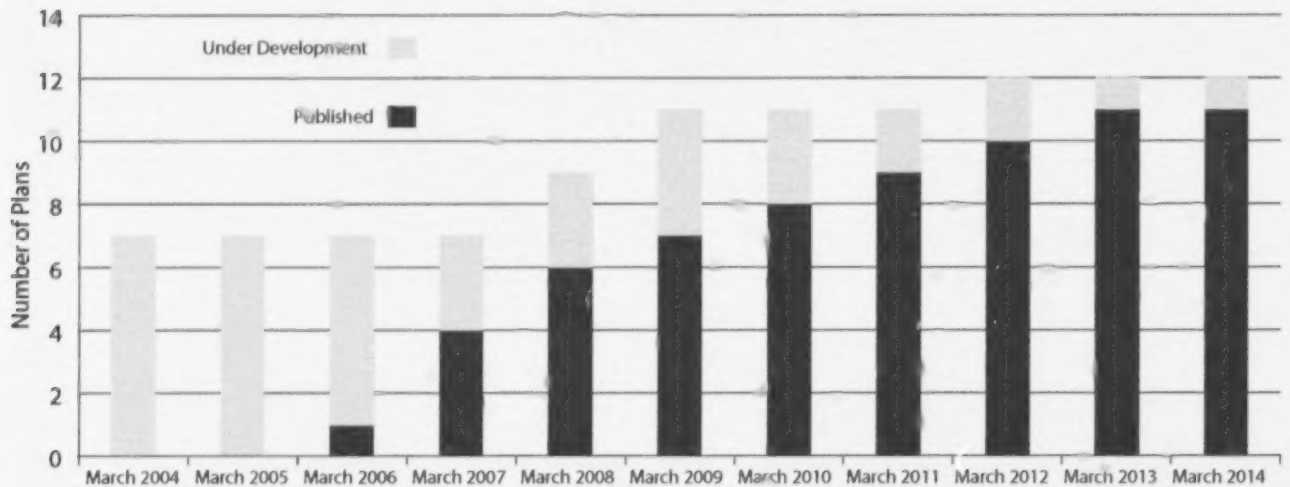
This measure supports the following strategy: **Ensure wastewater is effectively managed.**



Photo Credit: Tourism Saskatchewan, Greg Huszar Photography, Over the Hill Orchards

Measure

Number of source water protection plans under development and published



Source: Water Security Agency 2014

Measure Description

This measure is of interest to government as it provides an indicator of progress towards the protection of source water, thereby maintaining sustainable water supplies available to support our growth, a healthy environment and our quality of life. Source water protection plans are developed at a watershed or aquifer level by local advisory committee representatives, with watershed plans directed at protection of surface water and aquifer plans directed at groundwater. Completed plans set water management priorities and identify emerging water issues.

The Water Security Agency leads the planning process, directly influencing this measure. However, successful completion of source water protection plans is dependent on the commitment and ability of the local committee members to achieve a consensus on recommendations.

Originally, the Water Security Agency initiated seven plans and, as they were completed and staff became available, additional planning processes were initiated. The graph illustrates that the first plan was completed in year three, and the numbers reflect that planning processes are consistently coming to completion. Information used in this performance measure is derived from Water Security Agency program files.

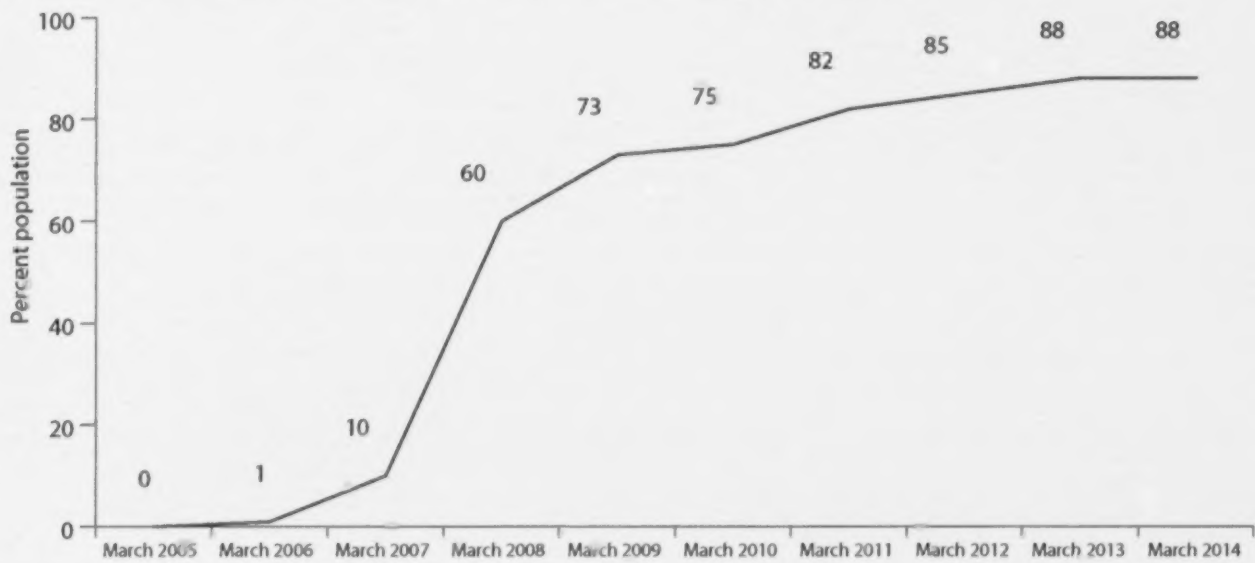
This measure supports the following strategy: **Ensure water quality, aquatic habitat and aquatic ecosystem function are sustained.**



Photo Credit: Saskatchewan Watershed Authority, photo by Jim Kroshius, Katepwa Weir

Measure

Proportion of provincial population covered by a completed source water protection plan



Source: Water Security Agency 2014

Measure Description

This measure provides meaningful context to the number of plans by adding the percentage of the population covered. The measure indicates that the Water Security Agency targeted early planning efforts at areas of highest population, and that the majority of the province’s population (88 per cent) lives in an area where a planning process has been completed. Population data is derived from 2011 census of Canada data.

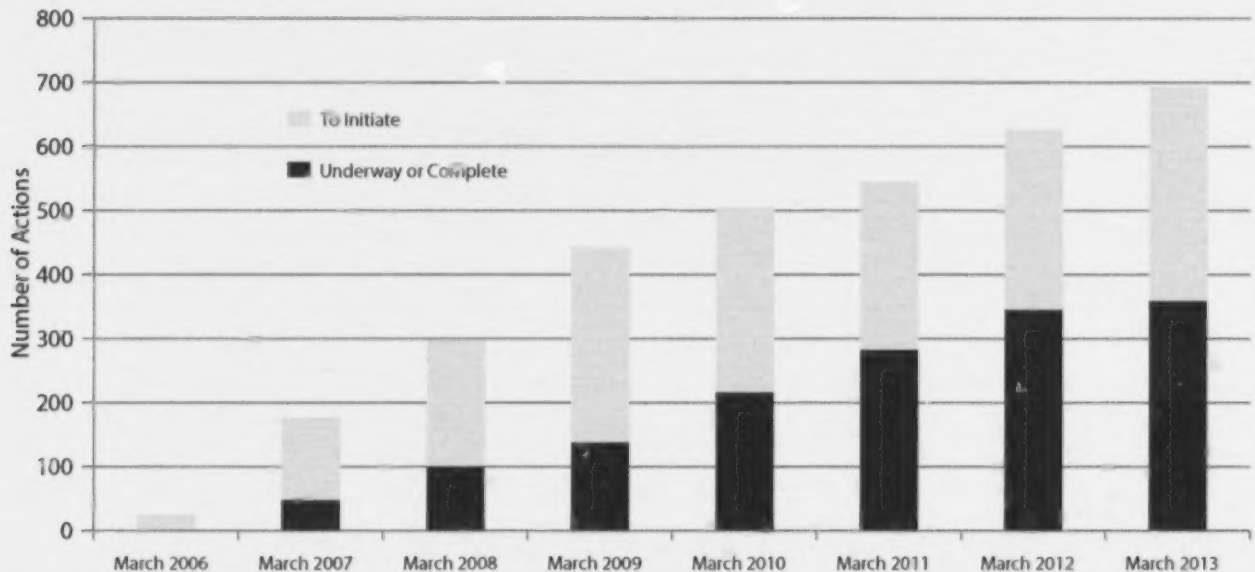
This measure supports the following strategy: **Ensure water quality, aquatic habitat and aquatic ecosystem function are sustained.**



Ministry of Parks, Culture and Sport, Greg Huszar Photography, Motherwell Homestead National Historic Site of Canada

Measure

Total number of source water protection plan key actions underway or complete in the province



Source: Water Security Agency 2013

Measure Description

Source water protection plans identify key actions needed to protect source water. As actions are undertaken, the degree of protection of source waters within the watersheds and aquifers is expected to increase, and water threats minimized. Each key action specifies the organization(s) responsible for implementation. Local watershed stewardship groups lead or influence others to implement actions and submit reports on progress to the Water Security Agency, which are used to develop this measure. Of note, in past reports on this measure, some actions have been reported as "underway" when watershed stewardship groups have undertaken communication with the agencies responsible for actual implementation. As of this plan, this type of activity will mean actions are reported as "to initiate."

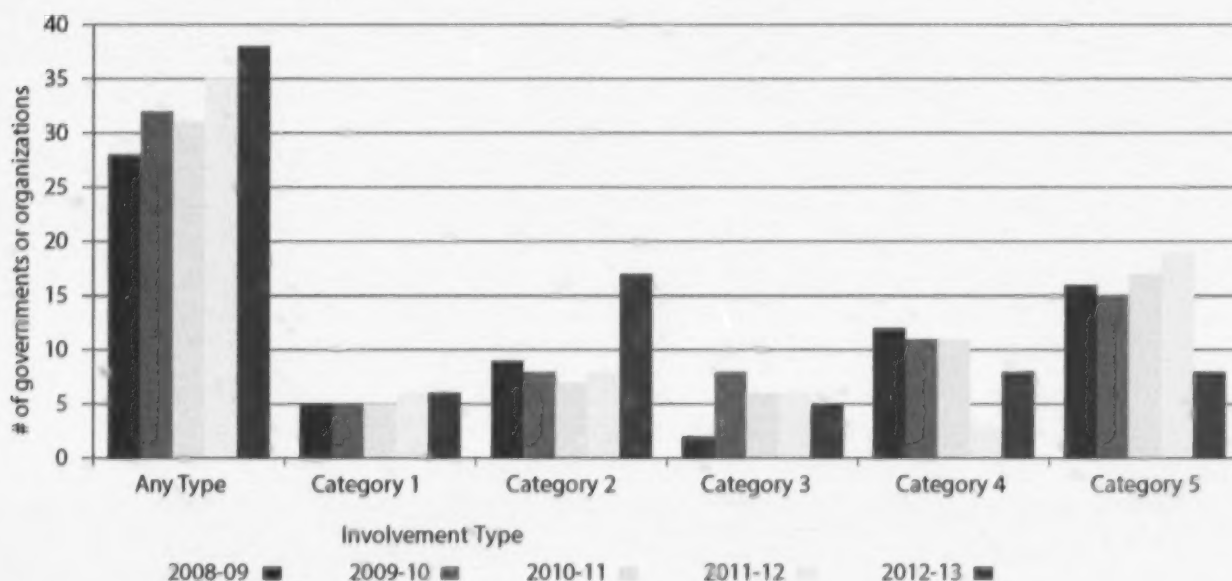
This measure illustrates the number of key actions underway or complete. Since the first plan was completed in 2006 through to March 2013, 360 watershed protection actions have been undertaken within the planning areas. As new plans are completed, additional actions are identified, thus the total number of actions has been increasing over time. In the graph above, the March 2013 data have been revised since the Water Security Agency's 2012-13 Annual Report, capturing the new actions identified by the Lower Qu'Appelle Watershed source water protection plan that was published in March 2013.

While the Water Security Agency provides funding and technical advice to the local watershed stewardship groups, it does not have direct control over completion of the majority of the identified actions and thus has limited influence over the measure.

This measure supports the following strategy: **Ensure water quality, aquatic habitat and aquatic ecosystem function are sustained.**

Measure

Number of First Nations and Métis governments or organizations with whom the Water Security Agency is involved



Source: Water Security Agency 2013

Measure Description

First Nation and Métis interest in water availability and quality continues to grow and may result in conflicts over use, especially in areas with water shortages. Proactive relationship building will help reduce future conflicts and contribute toward positive water management alliances. The number of organizations and / or government bodies with whom the Water Security Agency, at a minimum, has a two-way dialogue, is a simple measure of the Water Security Agency efforts to build relationships. Water Security Agency staff report this information on an annual basis, and the comprehensive results are summarized here.

For this measure, the total number of governments or organizations with whom the Water Security Agency is directly involved is presented, along with a breakdown according to categories of involvement, as follows:

Any type: This is the total number of First Nations and Métis governments or organizations with whom the Water Security Agency is involved in any of the categories. The Water Security Agency may have more than one category of involvement with any given government or organization; therefore, this does not represent a sum of the five broken-out categories.

Category 1: Formal Province – First Nations / Métis agreements or negotiations: discussions underway or agreement in place

Category 2: Formal consultations (activities specific to legal duty to consult requirements and including pre-consultation activities which may or may not result in formal consultations)

Category 3: Advisory board or committee participation (watershed / aquifer planning or infrastructure operation): representation on Water Security Agency -led planning or advisory committees



Photo Credit: Ministry of Parks, Culture and Sport, Greg Huszar Photography, Nesslin Lake Campground

Category 4: Community-based projects / initiatives: preliminary discussions, under development or already in place; Water Security Agency – First Nations / Métis projects

Category 5: Dialogue / information exchange / relationship-building: informal discussions with government / organization representatives, including feedback received about Water Security Agency initiatives

The 2012-13 measurement results indicate the Water Security Agency is directly involved with 38 First Nations and Métis governments or organizations, with a marked and positive increase in formal consultations (Category 2). This increase in consultation activities is largely a result of Water Security Agency strategic planning initiatives which provided an obligation and an opportunity for government to work with First Nation and Métis governments in seeking ways to avoid or to mitigate potential impacts to treaty and aboriginal rights.

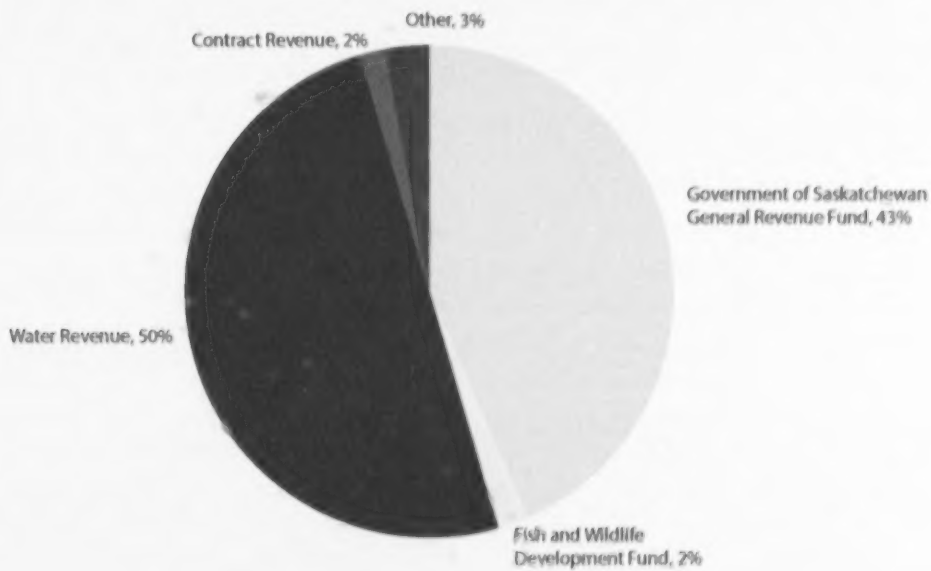
This measure supports the following strategy: **Work toward reconciliation in water management while meeting legal responsibilities for consultation and accommodation regarding First Nations and Métis communities.**

Financial Summary

2014-15 Estimates		(in thousands of dollars)
Appropriation		17,544
FTE Staff Complement		220.6
Revenue		(in thousands of dollars)
Government of Saskatchewan General Revenue Fund		17,544
Fish & Wildlife Development Fund		828
Water Revenue		20,218
Contract Revenue		695
Other		1,170
Total Revenue		40,455
Expenses		(in thousands of dollars)
Corporate Services		4,982
Integrated Water Services		12,368
Strategic Integration & Administration		2,197
Regional Services		6,291
Water Use & Licensing		1,316
Watershed Planning & Implementation		2,564
Engineering and Geoscience		9,949
Infrastructure Management - Engineering & Dam Safety		6,446
Hydrology & Groundwater Services		3,503
Environmental and Municipal Management		9,617
Drinking Water & Wastewater Management		6,877
Water Quality Services		2,800
Interest		1,299
Depreciation - Other Assets		850
Depreciation - Infrastructure Assets		4,400
Total Expenses		43,465
Deficit for the year		3,010

For more information, see the Budget Estimates at: <http://www.saskatchewan.ca/budget>

Water Security Agency Budgeted Revenue for 2014-15



Water Security Agency Budgeted Expenditures for 2014-15

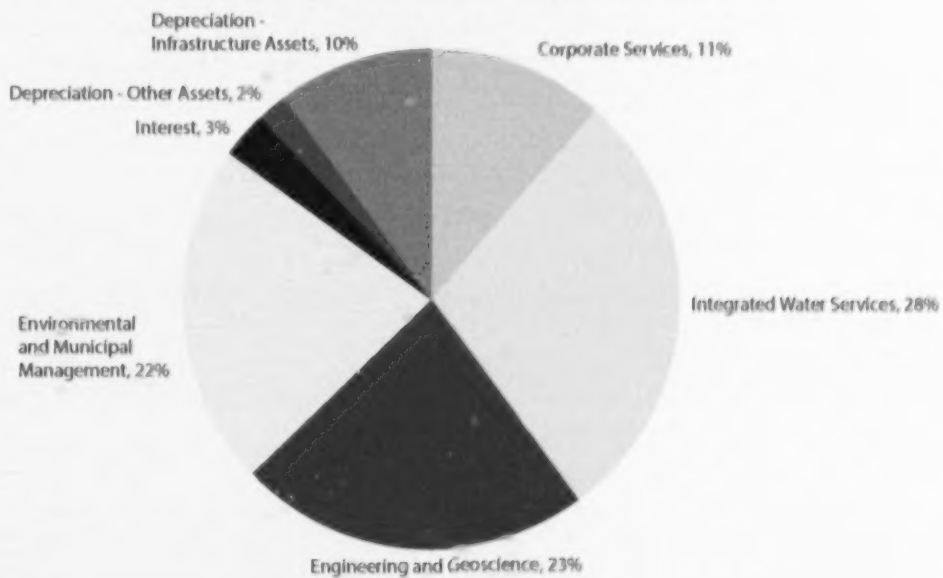


Photo Credit: Saskatchewan Watershed Authority, photo by Vicki East, Rafferty Reservoir

Highlights

2014-15 Budget Highlights:

The Water Security Agency plans for expenditures of \$43,465,000 during 2014-15. This budget allows the Water Security Agency to move forward with implementation of the 25 Year Saskatchewan Water Security Plan which supports the Saskatchewan Plan for Growth. Highlights include:

- Continued implementation of the 10 Year Water Management Infrastructure Renewal Plan with a planned capital investment of \$15.6 million:
 - \$9.9 million to continue rehabilitation and expansion of the M1 canal,
 - \$1.4 million to improve conveyance capacity in the Upper Qu'Appelle and ensure water supply to support growth in the Regina and Moose Jaw areas, and
 - \$4.3 million for rehabilitation at Gardiner Dam, the Rafferty Diversion Channel and other structures;
- An investment of \$438,000 to improve flow and flood forecasting, acting on a commitment in the 25 Year Plan;
- An increase of \$93,000 in grants for watershed stewardship groups to support implementation of a new source water protection plan, bringing total grants to support source water protection plans implementation to slightly more than \$1 million supporting 11 watershed stewardship groups;
- Planned expenditure of \$720,000 to improve our understanding of water quality and causes of water quality problems in Lake Diefenbaker and the Qu'Appelle system;
- Continued support of local government water management initiatives by maintaining the Water Control Program grant budget for channel maintenance and channel clearing at \$1.46 million.

For More Information

Please visit the Water Security Agency's website at www.wsask.ca for more information on the Agency's programs and services.

Front Page Photo Credits



Canola and flax fields
Photographer, Charles Melnick



Biking, Narrow Hills Provincial
Park
Greg Huszar Photography



Over the Hill Orchards
Greg Huszar Photography



Saskatchewan Legislative
Building
Greg Huszar Photography